Modeling 4D Benefits: Project Update August 27, 2007

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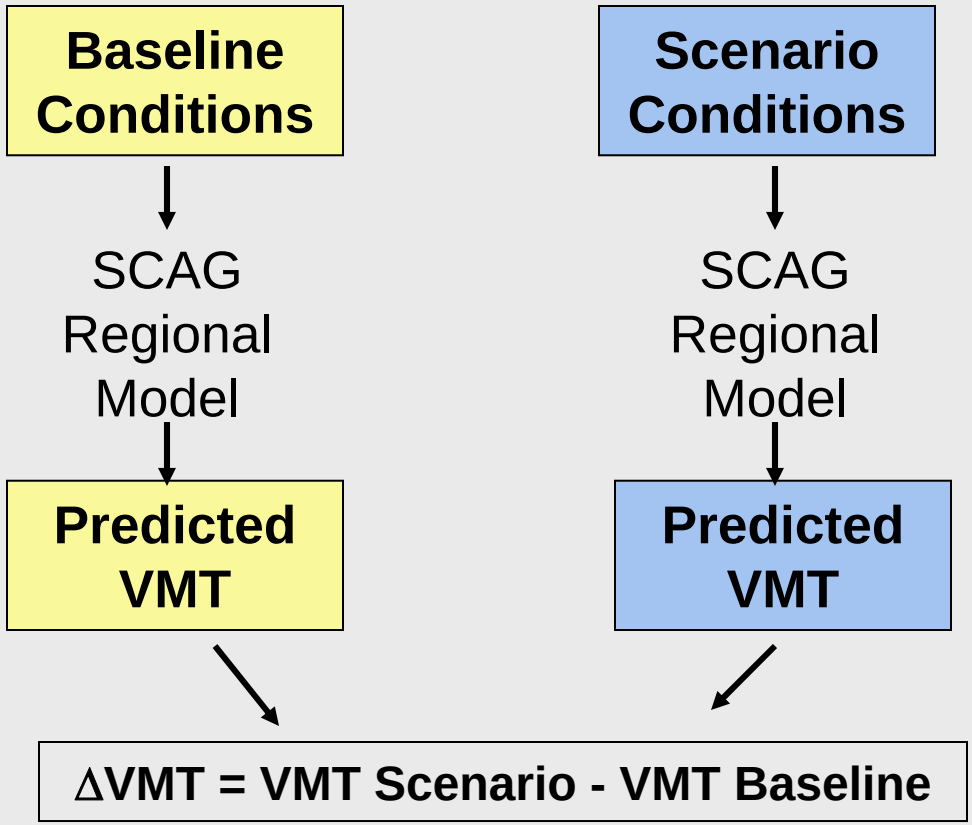
Activities Since August 16

- Written response to questions on regression models
- Detailed approach for application, present to SCAG internal modeling committee on Aug. 21
- Caliper Corp. staff working on programming for application
- Fregonese Associates team working on completing baseline

Today's Objective

4. Explain application approach
5. Get reaction & answer questions
6. Help us sharpen, finalize approach

Illustration of 4Ds Application Approach



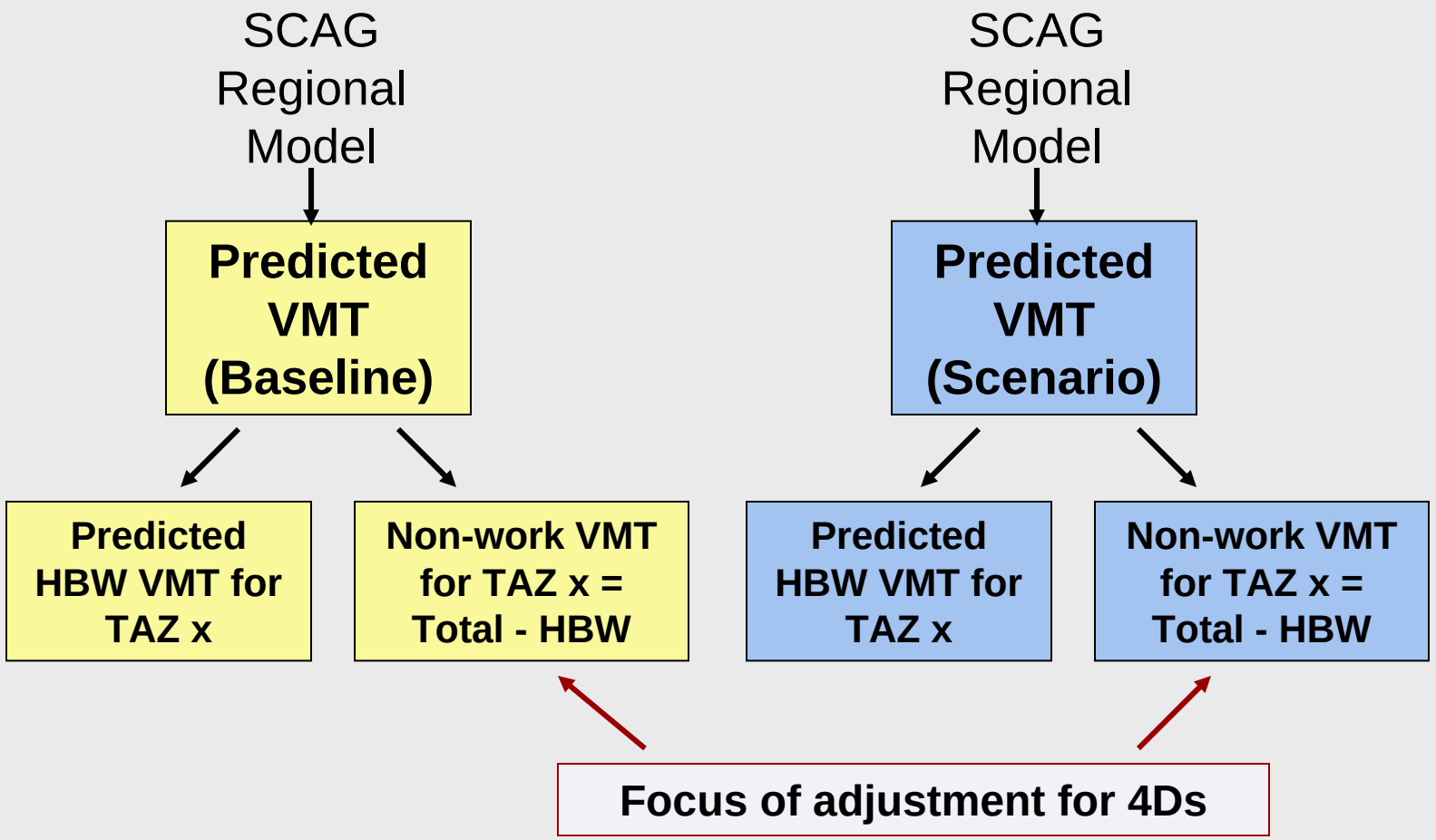
Assessment of First-Stage Analysis (Regional Model)

- Good for capturing effects of:
  - Regional shifts in population and jobs
  - Effects of jobs/housing balance
  - Effects of transportation network changes, transit options
- Not sensitive to effects of land use on:
  - Auto ownership
  - Non-motorized travel
  - Rates of auto use and average trip length

Assumptions for Capturing 4Ds

- Regional 4-step model accounts for macro SED and transportation system effects on ***Interzonal*** travel
- Impacts are most pronounced on work trips (HBW)
- 4Ds effects are most pronounced on ***Intrazonal*** travel, which is primarily non-work

Estimating 4Ds Effects: Focus on Non-Work VMT



Estimating 4Ds Effects within a TAZ Based on Grid Cells

Baseline TAZ

6	6	14
6	6	14
6	6	6
6	15	15
6	15	15

Scenario TAZ

6	6	4
6	4	4
6	4	4
4	4	3
4	3	3

Grid cells that have changed land use definition

Estimating 4Ds Effects within a TAZ

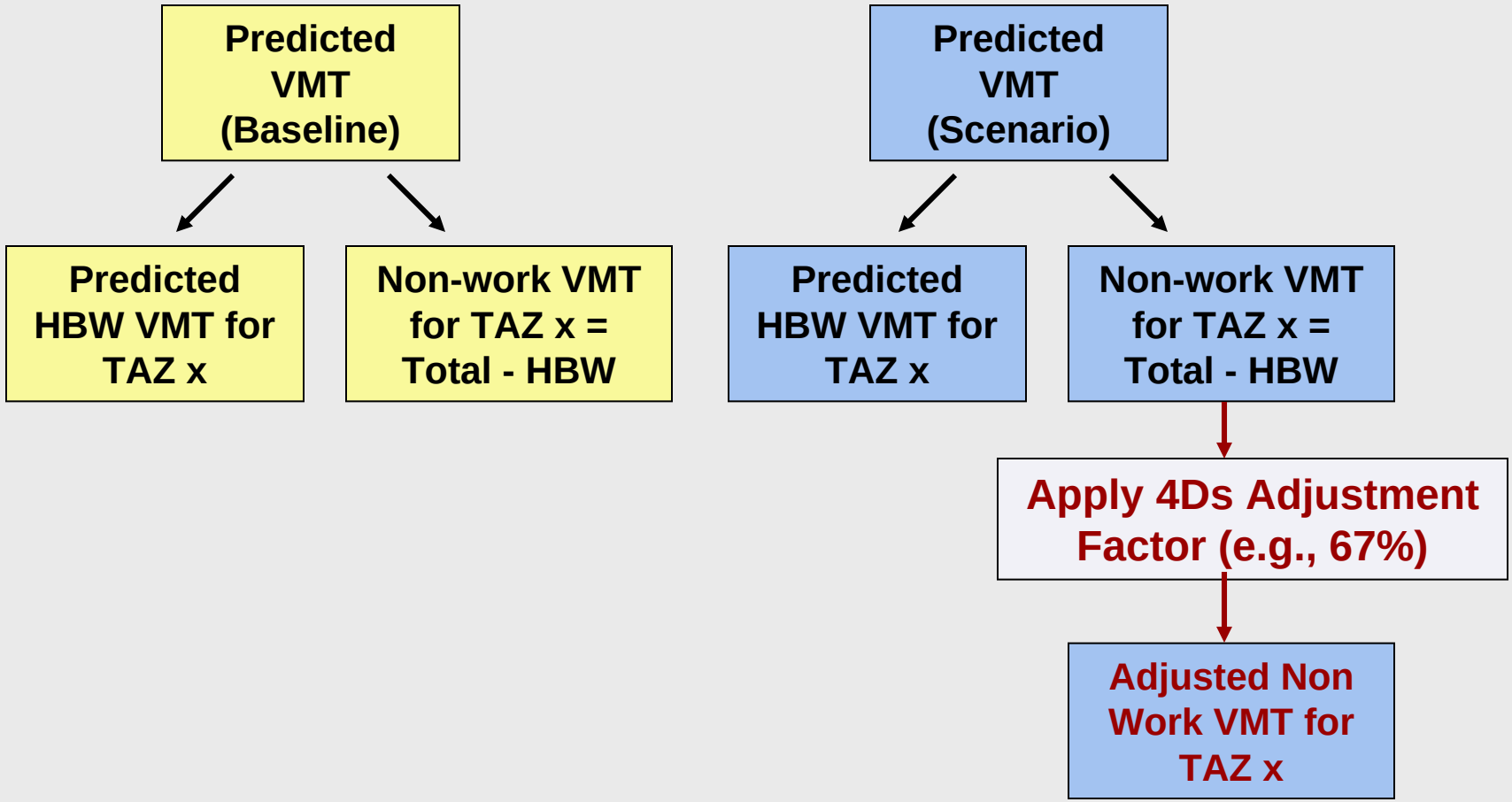
(only necessary to compute for TAZs that have changed)

		# Grid Cells		# Households			
Development Type		**Base**	**Blueprint**	**Base**	**Blueprint**	**LU Mix**	**WtdOpp**
1	Downtown Ctr					0.500	5000
2	Downtown Res					0.900	10000
3	City Center	0	3	0	20	0.900	10000
4	City Res	0	8	0	50	0.700	7500
5	Town Center					0.800	6000
6	Town Res	9	4	40	17	0.300	500
7	City Neighborhood					0.300	500
8	Residential Sub					0.000	0
9	Large Lot					0.000	0
10	Rural Cluster					0.000	0
11	Activity Center					0.500	5000
12	Transit Station					0.500	5000
13	Transit Corridor					0.500	2500
14	Main Street					0.800	8000
15	Office Park	4	0	0	0	0.000	0
16	Industrial					0.000	0
17	Highway Commercial	2	0	15	0	0.500	1000
	Totals	15	15	55	87		

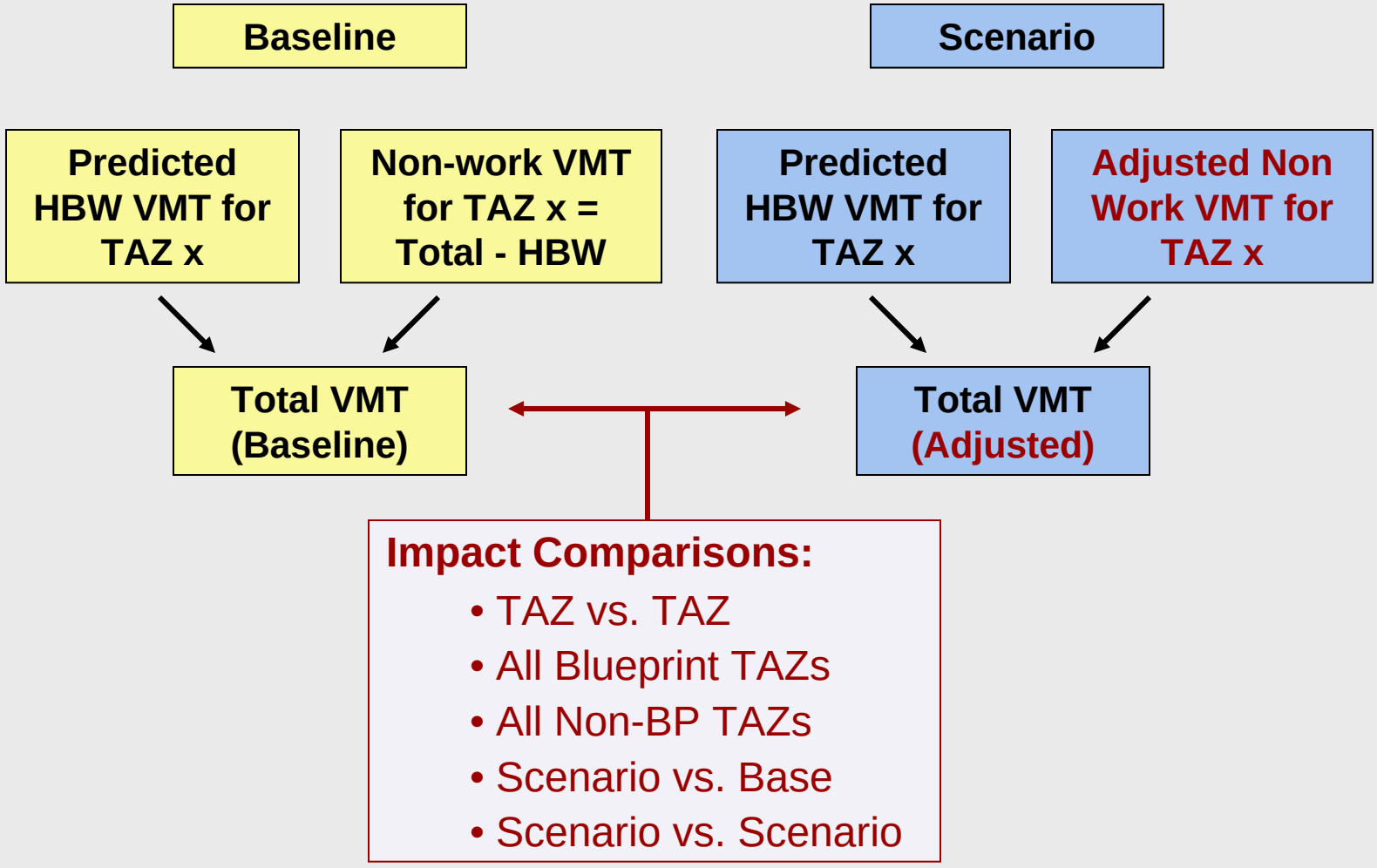
Estimating 4Ds Effects within a TAZ (cont.)

Land Use Mix	0.3545	0.6678
Walk Opportunities	636	6706
Reg Transit Acc	46,000	130,000
HH Size	2.5	2.5
Workers	1.6	1.6
Income	4.6	4.6
HBW VMT/HH	35	31
Vehicles (calculated)	1.97	1.89
Total HH VMT	49.2	40.1
Net HH VMT	14.2	9.1
Adjustment Factor		**64%**

Making the 4Ds VMT Adjustment



Reassembly and Comparison



Next Steps

- Acquire information on base case land use
- Test application on LA County
- Examine reasonableness and sensitivities -- make necessary adjustments
- Apply to all counties for provided scenario
- Develop program to enable SCAG staff to perform subsequent tests